

J. N. OLNEY.
Cooking Stove.

No. 467.

Patented Nov. 20, 1837,

FIG. 1.

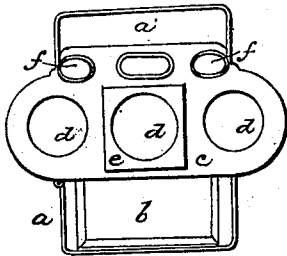


FIG. 3.

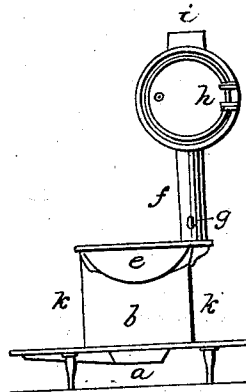


FIG. 5.



FIG. 6.

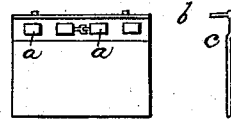


FIG. 7.

FIG. 2.

Part of this Fig lost.

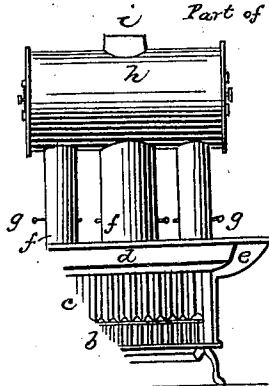
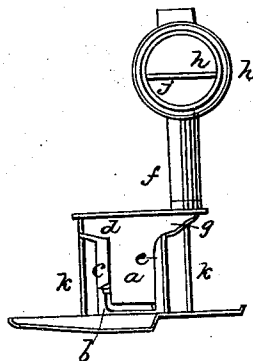


FIG. 4.



UNITED STATES PATENT OFFICE.

JAMES N. OLNEY, OF NEW YORK, N. Y.

COOKING-STOVE.

Specification of Letters Patent No. 467, dated November 20, 1837.

To all whom it may concern:

Be it known that I, JAMES N. OLNEY, of the city of New York, county and State of New York, have invented certain Improvements in stoves used for cooking, which, though intended principally for anthracite, may be used with other coal or with wood, and improvements also in the manner of constructing and combining therewith an elevated oven; and I do hereby declare that the following is a full and exact description thereof.

Figure 1, in the accompanying drawing is a plan or top view of my stove, the elevated oven being removed. Fig. 2, is a front elevation of the stove, with the elevated oven; Fig. 3, an end view of the same, and Fig. 4, a vertical section thereof through the middle from front to back.

The bottom plate of this stove extends out in front so as to form a hearth, *a* Fig. 1, with a sunken ash pit, *b*, as in many other stoves; it has also a hearth *a'*, projecting out at the back, these front and back hearths serving to sustain tin roasters or bakers which may be placed in the recesses formed by the projecting of the end plates and of the top of the stove.

c is the top plate, having boiler holes *d, d, d*; the center one of which is made in a square plate, *e*, which may be removed for the purpose of placing a gridiron over the fire, which gridiron may have a tin cover, with a pipe to conduct the fumes into one of the pipes or flues of the stove. The openings *f, f, f*, are to receive draught pipes, which communicate with the elevated oven, shown at *h*, Fig. 2. In this latter figure, *a*, is the ash-pit and *b* the front bars of the grate forming the lower part of the chamber which is to contain the fuel; these grate bars have an elevation of about four inches extending up to the corrugated or zig-zag plate *c*, which forms the front of the fire chamber, its lower edge being five inches above the hearth. One of the grate bars is seen at *b* in the section, Fig. 4. The end plate *b*, Fig. 3, is formed to receive a lining of fire brick, and the back also is lined with fire brick as shown at *e* Fig. 4. In this last figure, *a* is the fire chamber, which with the back lining *b*, and the zig-zag, corrugated plate, seen in profile at *c*, forms the whole depth of the body of the stove, which, it will be seen is much less than the width of the end plate *b* Fig. 3. This extra width is occupied by a

front and back recess, formed by the hearths, the projections of the end plates, and of the top of the stove, thus contracting the fire chamber within proper limits. The vertical edges of the end plates are show by the lines *h, h* and the manner in which the top projects in front and back is shown at *d* and *g*, which form spaces above the fire chamber, the front projection being shown also at *d*, Fig. 2. This space is again enlarged at each end, by the swell *e, e*, on each of the end plates (Figs. 2 and 3.)

The elevated oven *h*, Fig. 2, I make cylindrical forming it of the concentric plates *h, h*, Fig. 4, into the space between which the pipes *f, f, f* (Figs. 2, 3 and 4) lead. These pipes are furnished with dampers *g, g, g*, to regulate the heat. In stoves of a small size, two pipes *f, f*, will suffice but in the larger kind it will be found best to have three, as giving a more perfect command of the heat. These pipes should elevate the oven above the ordinary height of cooking utensils, which will in general be effected by a length of about fourteen inches. The collar *i* on the top of the oven, should be placed in the center as shown in the drawing, as the heat may then be best regulated. The ends of the oven I make of cast iron, the cylinders being of sheet iron, (the outer cylinder may be constructed of sheet zinc.) A cast-iron rim or ring is furnished with flanches which receive the cylinders, rods passing through the spaces between the two cylinders, to confine the rims in their places. At each end, occupying the space within the rims, I place a cast-iron door, provision being made for suitable hinges and latches; a shelf, or plate of sheet iron *j*, Fig. 4 which should be perforated with holes stands an inch or two below the center of the oven; this can be raised upon flanches on the inside of the oven, or removed when desired.

The sliding plate which covers the ash-pit, or sink, in the front hearth, is constructed that a flap attached to it may be made to cover the grate bars in front, so as to convert the fire chamber into a close stove, and this is combined also with a sliding shutter or damper, causing this apparatus to operate as a blower, and to regulate the draught with the utmost nicety. This arrangement is shown in Figs. 6 and 7.

Fig. 6 is a top view of the sliding plate and *a, a, a*, are openings through it, toward its back edge; instead of several openings

as represented, there may be one only of any required length. A sliding damper furnished with a rod which may extend forward under the sliding plate, and serving to regulate this damper, is so constructed as to open or close the aperture or apertures to any extent. To the back edge *d*, of this sliding plate there is hinged a flap which when down covers the openings *a a* and their damper, and is of such width that when up it shall reach to the corrugated plate, completely inclosing the grate bars. This map is shown at *b*, in the edge view, Fig. 7. When down it falls into the recess *c* so as to be flush with the general surface of the sliding plate. Fig. 5 is a section of what I have called a zigzag or corrugated plate.

What I claim as my invention in the within described stove and elevated oven, is—

1. The constructing of the stove with the combined front and back recesses, formed by the two hearths of the bottom plate, the projection in front and back of the two end plates, and the widening of the fire cham-

ber immediately under the top plate, as herein fully set forth.

2. I claim also the arrangement herein described, by which the grate bars in front may be inclosed by means of a plate or flap, hinged on the back edge of the sliding cover of the ash pit and the combination therewith of a sliding damper, covering openings in said sliding cover, substantially in the manner and for the purposes set forth.

3. I do not claim the forming and placing of an elevated oven above a stove with pipes, or flues leading therefrom to the space surrounding the oven, this having been before done, but I do claim the combining of a stove such as herein described, with a cylindrical oven, having a door at one or at each end, the whole connected and arranged as above shown such construction and arrangement being, as I believe, essentially new.

JAS. N. OLNEY.

Witnesses:

WM. H. DRAKE,
J. SPENCER, Jr.